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Early Years at the National Reconnaissance Office

Interagency Dynamics and Organizational Myths (U)

R. Cargill Hall

Editor's Note: This article presents a different angle on the NRO's early years from that found in Robert Kohler's essay "One Officer's Perspective: The Decline of the National Reconnaissance Office." (U)

Former NRO Deputy Director and CIA officer James Reber used to describe the National Reconnaissance Office (NRO) as the first hybrid American intelligence organization. In early 1961, President Kennedy linked military and civilian members of the Intelligence Community involved with satellite reconnaissance programs on a permanent basis for the first time. That "shotgun marriage," Reber mused, was unappreciated by those reluctantly brought to the altar, and the early years unquestionably were turbulent ones as the partners sought to establish their prerogatives and authorities.¹ (U)

Needless to say, in the compartmented, covert world of the early NRO, where information frequently was not shared among its program elements, fact and misperception combined easily to produce enduring myths. This brief essay reviews the primary bureaucratic issues that provoked officials of the various organizations involved, and cautions analysts and historians about perpetuating myths by relying solely on the records or recollections of personnel in one directorate or office. (U)

The Charter Battles (U)

The NRO was the product of a review of the Defense Department that President Kennedy's new Secretary of Defense, Robert McNamara, conducted shortly after he arrived in office. The Secretary of Defense decided to consolidate like functions in single organizations, a move that also created the Defense Intelligence Agency and the Defense Supply Agency (the current Defense Logistics Agency). The NRO emerged as a civilian-led agency of the Department of Defense, which, by virtue of an earlier decision by President Eisenhower, was located administratively in the Department of the Air Force. McNamara's directive also made the NRO a classified organization, the existence of which was known only to those directly involved. (U)

Consolidating the nation's overhead reconnaissance assets under an NRO made perfect sense to McNamara, and he delegated operation and oversight of the new office to co-directors Air Force Undersecretary Joseph Charyk and CIA Deputy Director (Plans) Richard Bissell. The

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accompanying charter and interagency agreement transferred control of the CIA-managed CORONA film recovery satellite program to the NRO—to the dismay of CIA leaders. A follow-on agreement provided for the shift of the Navy's GRAB satellite program to the NRO in 1962. (U)

Charyk and Bissell worked well together, but that partnership ended when Bissell departed from government service in February 1962, in the aftermath of the failed Bay of Pigs invasion. That left Charyk as sole Director of the National Reconnaissance Office (D/NRO). A second NRO charter executed by the Defense Department and the CIA in May 1962 made this leadership arrangement formal and identified the Defense Department as responsible for funding the National Reconnaissance Program (NRP). (U)

On 23 July 1962, D/NRO formally identified each of the overhead reconnaissance organizations in the NRP: Program A, the Air Force satellite reconnaissance element in El Segundo, California; Program B, the CIA satellite reconnaissance element at Agency headquarters in Langley, Virginia; Program C, the US Navy element, made up of representatives of the Naval Research Laboratory, the Naval Security Group, and the National Security Agency, also located in the Washington, DC, area; and Program D, which oversaw support of all aerial reconnaissance assets—the U-2 and A-12/SR-71—until the program's demise when those assets were transferred from the CIA to the US Air Force on 1 October 1974. (U)

Having the organizational components identified and ordered was one thing; getting them to respond and act together as a team was quite another matter. President Kennedy had selected John McCone, a Republican and well known corporate leader, to succeed Allen Dulles as DCI. Confirmed by the Senate, McCone assumed his new duties in late 1961. With a reputation as an able and effective manager, he set about reorganizing the CIA in keeping with the recommendations of the President's Foreign Intelligence Advisory Board. In August 1963, he established a new directorate devoted to science and technology (DS&T). To head the new directorate, McCone chose Albert "Bud" Wheelon, who had come to the Agency's space program from industry in 1962. Together they set about securing advanced devices for technical intelligence collection, including overhead reconnaissance systems such as CORONA, in an Agency culture that still preferred human agents engaged in clandestine operations. (U)

By early 1963, when D/NRO Charyk left government service, McCone had come to regret the 1962 charter that gave so much authority to the NRO and its director. The Defense Department-CIA charter of May 1962 had placed technical management of the NRP in the hands of Charyk, who exercised that technical management in the manner of a Chief Executive Officer, just as McNamara had intended. In line with these authorities, the D/NRO not only identified each of his organizational components alphabetically, but also approved funding for existing programs and new starts. In practice, this worked more smoothly for Programs A and C, than for Program B. (U)

DCI McCone and Deputy Secretary of Defense Roswell Gilpatrick negotiated and executed a third charter in mid-March 1963. It named the Secretary of Defense as the Executive Agent for the NRP, established a Deputy Director of the NRO as a CIA billet, defined the duties of the director and his deputy, and gave to the DCI concurrence in the selection of future NRO directors.² But Brockway McMillan had already been named as Charyk's successor. McMillan, a former executive at Bell Laboratories, soon made plain he would operate the NRO as a CEO, in the manner of his predecessor. Not only did he direct activities of NRO Programs A and C, he acted to direct affairs in the CORONA Program and approve new program starts in the CIA's Program B. McMillan and Wheelon had had professional differences before they came to government service.

Those differences, and Wheelon's preference for operating Program B unfettered by D/NRO instructions, colored their relations for the next two years. (U)

Unlike Wheelon's Program A and C counterparts who reported directly to D/NRO, he reported to the DCI. Wheelon also appeared before Congressional committees, something that the military program directors of the NRO could not do. That advantage gave the director of the DS&T enormous leverage in the NRP. Wheelon, with McCone's support, declined to report to D/NRO except under circumstances when funding or new program starts made it unavoidable. Program B, meanwhile, pressed ahead with studies of new and technically sophisticated signals intelligence and imaging satellite systems. (U)

Between 1963 and 1965, the relationship between D/NRO and the CIA went from bad to worse. McMillan called on Deputy Secretary of Defense Gilpatrick to intervene in the management of Program B. At CIA headquarters, Wheelon viewed D/NRO guidance as unwanted meddling in the Agency's internal operations. He urged McCone to renegotiate the NRO charter. McCone agreed and advised Gilpatrick that a new charter was absolutely essential. His aim was to strip D/NRO of any CEO authority that allowed him (or the Defense Department—now termed "Air Force" in internal correspondence) to be involved directly in CIA affairs, making him instead a Chairman of the Board, who would preside over separately managed operating companies. (U)

The CIA negotiated a fourth charter directly with the Defense Department, without NRO headquarters' involvement. It was signed by DCI McCone's successor, William Raborn, and Gilpatrick's successor, Cyrus Vance, on 11 August 1965, which was a few days after D/NRO McMillan left government service to return to Bell Labs. (U)

The resulting *Agreement for Reorganization of the National Reconnaissance Program* remains the charter in effect today. It curtailed the authority of D/NRO and thus hewed more closely to McCone's desire for a chairman-of-the-board arrangement. It reaffirmed the NRO as a "separate agency of the DoD" responsible for the "management and operation" of the NRP. Under its terms, D/NRO continued to report to the Secretary of Defense on matters of NRP operations and budget, and to the DCI on intelligence requirements and tasking. (U)

This charter established an Executive Committee with the power to approve or modify the NRP and its budget, and to allocate responsibilities and funds for specific reconnaissance programs to those CIA or Defense Department components of the NRO "best equipped with facilities, experience, and technical competence to undertake the assignment." The EXCOM, as it came to be called, consisted of the Deputy Secretary of Defense, the Director of Central Intelligence, and the President's Science Advisor. The D/NRO, a non-voting member, appeared at EXCOM meetings to present cases for new program starts and future plans or to answer questions. Other attendees included the Director of the Bureau of the Budget, or his designee, and the DoD Comptroller. (U)

For the next eight years, under the chairmanship of the Deputy Secretary of Defense, the EXCOM addressed and decided key NRP issues and administered its affairs and budget effectively. In early 1973, however, President Nixon named DCI James Schlesinger Chairman of the EXCOM. Schlesinger had argued successfully that the DCI headed the nation's Intelligence Community and thus should chair the committee that oversaw the NRP. Thereafter, the Deputy Secretary of Defense ceased attending meetings and sent in his place the Assistant Secretary of Defense for Intelligence. At about the same time, Nixon abolished the position of Science Advisor, severing the connection between the NRP and the White House. (U)

What previously had been EXCOM decisions now became DCI "recommendations." These recommendations were staffed at both the Defense Department and through the recently formed Intelligence Community Staff, which increased the time that it took for agreement to be secured on all sides. The EXCOM functioned fitfully for a few more years, until President Ford abolished it in 1976, placing the NRP budget in the hands of the DCI. (U)

Program Frictions (U)

The contention over NRO authorities and prerogatives had produced a charter that all could live with in 1965, but it hardened attitudes and distorted perspectives among many in the NRO for years afterward. Some ranking Air Force officers in Program A and on the staff at NRO headquarters came to view the leaders of the CIA's Program B as untrustworthy dissemblers who would say or do anything to take over the National Reconnaissance Program—a near-mirror image of the views held at Langley. A former NRO official recalled in an interview that a Program A director, in his dealings with Program B, "became nearly paranoid—but not without cause." At Langley, many Program B officials in the DS&T viewed Program A's effort with undisguised disdain. Deputy Director for Science and Technology Bud Wheelon recalled telling DCI McCone that the country could not rely on "the Air Force" for satellite reconnaissance: "The fact is that the Air Force has done a miserable job with its own [reconnaissance] space programs. SAMOS [a near-real-time analog film-readout satellite] has been an unqualified disaster. By contrast, the Agency's program in this area has been an unqualified success."³ (U)

One more example should suffice to underscore the bitter-ness, distrust, and misperceptions that afflicted some, but of course not all, members of NRO Programs A and B in the years that followed the charter battles of the early 1960s. In late 1971 (b)(3)(c) the director of the newly authorized Electro-Optical Imaging satellite program, wanted Air Force Maj. Jimmie Hill—who had made a name for himself as a comp-troller in Program A and had worked well with members of Program B—reassigned to the CIA to help control the budget on this technically risky endeavor.⁴ As Hill recollected the episode:

(b)(3)(c) was the program director for the [Electro-Optical satellite effort] and worked under Harold Brownman, who reported to Carl Duckett, who was DDS&T. I was then reassigned as an Air Force officer to CIA, which at the time was a questionable move, but General [David] Bradburn had agreed that he would continue to be my reporting official so that my career wouldn't suffer by being assigned to the CIA.

To illustrate some of the tension that existed, one of the people I had worked with was (b)(3)(c) depu(b)(3)(c) had been on the source selection committee with me for the [program] and was running the program once it was approved. We had gotten along quite well during the source selection process. But it was (b)(3)(c) Dirks, and Brownman who had in fact talked me into coming back. The day I reported in to the Agency Headquarters at Langley, as it turned out, (b)(3)(c) was gone. So I went up and (b)(3)(c) was there. His secretary, Betty, told him that I was out there. He asked me to come in, sit down, and have a cup of coffee and we "chitty chatted" for a little while, and he said, "Well, what can I do for you?" And I said, "I am here to go to work." ... I'm in uniform. And he said, "A [expletive] blue suitor in this organization—over my dead body!" And up he got and stormed out of the office.

So I sat there, dumbfounded, and he came back about an hour later and told Betty to

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have that [expletive] Air Force Major get up and go to another office. I was taken to another office to wait, and (b)(3)(c) went back into his office. And for the next 18 months we worked in the same program, but he never said a word to me. He was one of my bosses, but if he had any tasking for my office, he would pass it through (b)(3)(c) (b)(3)(c) who [had just joined the Agency and] worked for me at the time.⁵ (U/FOUO)

Other NRO alumni have offered recollections on related matters great and small. To establish a useful perspective, an NRO context, and verisimilitude, however, all recollections should be compared with the written records of the day, specifically *records drawn from the files of more than one program or directorate*. The famed flier, James "Jimmy" Doolittle—who was a member of the President's Foreign Intelligence Advisory Board between 1960 and 1963 and played a key role in establishing the Directorate of Science and Technology at the CIA—counseled his godson in 1984 about the dangers of relying on memory alone. For those of us in the trade, it is worth repeating:

The human mind is a very complicated thing. When one thinks over and over a certain event in which he participated, or even watched—particularly if the action is fast—[he is] inclined to change it an infinitesimal amount each time—always in his favor. After a long period of time he may change it 180 degrees and never realize that he has done so. This is one reason why, in recalling an event after a long period, people who all saw it—for example an accident—may later remember it very differently.⁶ (U)

On Myths and Misperceptions (U)

Once committed in print, misperceptions can assume myth-like qualities, especially when they coincide with one's own worldview and are rebroadcast and footnoted in "scholarly sources." In terms of NRO and CIA history, the two most treacherous myths are those already broached: that the CIA in the early 1960s successfully blocked an Air Force attempt to "take over" the NRO and redirect its reconnaissance activities toward tactical instead of strategic intelligence; and that the Air Force element of the NRO, in developing reconnaissance satellites, had demonstrated such gross incompetence that it made the threat posed in the first myth all the greater. (U)

When Charyk's office became the NRO in 1961, except for the low altitude tactical signals intelligence satellites that collected against Soviet air defense radars, *all* of the imaging reconnaissance satellite programs that composed the National Reconnaissance Program between 1961-1965 were planned and directed exclusively to serve the strategic reconnaissance needs of the national command authorities. Moreover, under the terms of the early NRO charters, the DCI controlled National Reconnaissance Program collection requirements through the United States Intelligence Board and its Committee on Overhead Reconnaissance (COMOR), ensuring a strategic rather than a tactical military focus. An Agency historian, nevertheless, could mine the files of the DCI and DS&T, and, without offering any serious supporting illustrations, emerge to declare emphatically: "McCone, with Wheelon's assistance, turned back the Air Force's attempt to take over space reconnaissance for tactical intelligence purposes."⁷ DCI McCone helped foster this misperception in his own correspondence, referring time and again to the NRO as "the Air Force." However, the NRO, like the CIA, *was a civilian office* directed by a civilian. (U)

To be sure, President Eisenhower had approved establishing what became the NRO in the Department of the Air Force, and D/NRO for many years was the Air Force Under Secretary. But that civilian official reported to the Secretary of Defense *and* to the DCI, not to the Secretary of the

Air Force. Moreover, the Air Force element in the NRP, the Program A Special Projects Office and its extensions located on the other side of the country, reported only to D/NRO; it remained *entirely outside* the Air Force chain of command. Indeed, Program A was so isolated geographically and so insulated operationally from US Air Force control that Air Force Secretary Eugene Zuckert (1961-1965), on hearing a reference to the Special Projects Office at a staff meeting, reportedly snapped: "That's Charyk's Air Force!" Ultimately, the bureaucratic tensions that swirled around the formation of the NRO involved struggles over authority, particularly the authority of D/NRO, rather than over program direction. (U)

What about the quality of Program A satellites in the 1960s—were they the failures that are the stuff of lore? The actual story is rather different. Conceived in the mid-1950s, the novel SAMOS imaging system at that time represented cutting edge technology.⁸ When launched into a low-earth orbit in late 1960 and early 1961, however, SAMOS E-1 imaging payloads encountered problems. Like Program B's CORONA satellite that recovered film capsules, the E-1 readout payload was a film-limited system and did not have a long life on orbit. Second, it had no image storage and recall capability and had to transmit its take to a ground station on the next pass. Third, the images were not encrypted; therefore, for security reasons, the film had to be read-out over the continental United States. Finally, SAMOS, operating at a bandwidth threshold of six megahertz and in view of a ground station for only a few minutes as it passed overhead, would lose part of its reconnaissance take on each revolution. In September 1961, therefore, NRO Director Charyk terminated the SAMOS film read-out payloads, subsequently concentrating NRO efforts on CORONA and the other film recovery satellite systems then under development. (U)

The SAMOS imaging technology was transferred to the National Aeronautics and Space Administration for use in its deep space exploration program, a fact just recently declassified.⁹ Instead of representing an "unqualified disaster," as Wheelon described it, Program A's SAMOS not only was the nation's first near-real-time film imaging system, but also it helped to make manned lunar exploration possible. Program B's near-real-time electro-optical imaging system that followed in the 1970s was, to be sure, the wave of the future; it evolved into the first near-real-time digital imaging system. But, as near-real-time myths go, it ran second to an earlier Program A contribution to America's deep space exploration. (U)

SAMOS signals intelligence payloads went on to form, with the Navy program, a family of low earth orbiters that, in the main, were directed to tactical reconnaissance applications. Two other Program A signals intelligence satellite projects were approved in the mid 1960s, both of them directed toward collecting strategic intelligence related to the Soviet anti-ballistic missile (ABM) threat. One collected ABM radar signals and pioneered for the Intelligence Community highly elliptical earth orbits; the other, a communications collector, operated successfully in a geosynchronous orbit. [redacted] (b)(1)

[redacted] (S)

[redacted] (b)(3)(n)

In 1961, Charyk authorized Program A to begin work on a meteorological satellite that would fly ahead of NRO imaging satellites and assay the cloud cover over the Eurasian land mass. Pictures of cloud-obscured sites retrieved from a film-limited spacecraft cost dearly—a fact made plain in 1960-1961 by the return from Program B's early CORONA missions. A small group of Air Force officers modified a TIROS experimental satellite for operational use, integrated it with a new booster, and, beginning with the first successful launch in August 1962, advanced the technology so well, so quickly, and so inexpensively that the Commerce Department adopted the NRO version for its own meteorological purposes.¹⁰ Finally, in the fall of 1962, D/NRO Charyk approved another Program A initiative for a "proof of concept" launch of a reconnaissance satellite

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employing a new technology that opened the way to a new form of overhead imaging. (S)

Keeping Things in Perspective (U)

Certainly by 1965, NRO reconnaissance satellites provided the nation's leaders with a relatively quick response to intelligence requirements through unimpeded, unobtrusive access to denied areas worldwide. Collectively, the NRO alphabetic program elements revolutionized overhead reconnaissance in the years that followed. Whatever the early bureaucratic disputes in Washington, they were but one aspect of the NRO's larger history. (U)

Throughout the early years, NRO contractor and government personnel at the working level collaborated closely and effectively. In fact, during the 1960s, no single NRO element "did everything," as some in Programs A and B would have it. In prosecuting CORONA, for example, CIA Program B and its contractor personnel furnished the camera payload, the security system, and the mission plans and requirements. Air Force Program A representatives and other contractor personnel provided the Thor launch vehicle and the Agena second stage CORONA satellite. They tested them; integrated and checked them out with the CORONA payload at Vandenberg Air Force Base, California; launched the combination; tracked and controlled CORONA satellites on orbit; and captured the film buckets after reentry. Program B's KH-9 follow-on imaging satellite was also a joint effort with Program A. The CIA and Air Force veterans of these early programs who gathered in September 2000 to mark the 40th anniversary of the National Reconnaissance Office agreed that there was more than enough credit to go around. (S)

This elucidation of early NRO actions and events is intended to remind analysts and historians of the pitfalls of "making history" inadvertently—of perpetuating myths by relying on the perspectives and resources of only one entity in the complex NRO constellation. Once fashioned, such myths tend to undercut the accomplishments and dedication of the many who devoted their careers to advancing the national reconnaissance effort. (U)

Footnotes

1. The CIA's disquietude, in particular, is documented in such works as (b)(3)(c) "Charting a Technical Revolution: An Interview with Former DDS&T Albert Wheelon," *Studies in Intelligence*, Vol. 45, No. 2, 2001, pp. 31-44 (S); David Robarge, "John A. McCone, Bud Wheelon, and the Wizards of Langley: The Creation of the DS&T and the Battle Over Spy Satellites," in Michael Warner and Scott A. Koch, eds., *Fifty Years of the CIA* (Washington, DC: CIA, 1998), pp. 147-178 (S); Gerald K. Haines, *The National Reconnaissance Office: Its Origins, Creation, & Early Years* (Washington, DC: NRO, 1997) (U); and Robert L. Perry, *Management of the National Reconnaissance Program, 1960-1965* (Washington, DC: NRO, second printing, 2001). (U)
2. First among the duties of the CIA deputy was supervising relations between the NRO and the DCI-chaired United States Intelligence Board, which set intelligence requirements and target priorities for the NRP. See Appendix H in Perry, p. 173. (U)
3. Wheelon, as cited by (b)(3)(c) p. 38. Extract is UNCLASSIFIED. (U)
4. Jimmie Hill began his NRO career as an Air Force officer and concluded it as the CIA's deputy

director of the NRO, which lends credence to his perspective. Having served at the NRO from the mid-1960s until his retirement in 1996, he is one of the Office's longest serving and most respected alumni. (U)

5. Jimmie D. Hill, oral history interviews with R. Cargill Hall, 27 June, 7 July, and 21 July 1997, pp.16-17. Extract is UNCLASSIFIED/FOUO. (U)

6. Jimmy Doolittle, letter to Thomas Lanphier, 27 December 1984 (emphasis in the original), as cited in R. Cargill Hall, "The Yamamoto Mission: A Retrospective," in Hall, ed., *Lightening Over Bougainville: The Yamamoto Mission Reconsidered* (Washington, DC: The Smithsonian Press, 1991), p. 30. (U)

7. Robarge, p. 167. Extract is UNCLASSIFIED. This interpretation of events, though more nuanced, is now in open literature courtesy of Jeffrey T. Richelson, *The Wizards of Langley: Inside the CIA's Directorate of Science and Technology* (Boulder, Colorado: Westview Press, 2001), cf. Chapter Four: "Space Reconnaissance Wars" and its endnotes. (U)

8. The Eastman Kodak Company built the E-1 (preliminary) and E-2 (advanced) payloads. The E-1 featured a six-inch focal length lens in a camera that spooled a special two-component EKC Bimat (positive) film and SO243 (negative) film. The exposed negative film, converged with the Bimat gelatin-coated Estar, was developed in a semi-dry chemical process, and then was scanned by a Columbia Broadcasting System flying spot line-scanner that consisted of a cathode-ray tube and a rotating anode having a high intensity spot of light. A photomultiplier converted the light passing from the scanner through the film into an electrical signal whose strength varied with the density of the emulsion layer of the film. The images were then radioed to earth and assembled much in the manner of a wire photo, each image built up in swaths. (U)

9. The Eastman Kodak Company modified the E-1 camera with an 80 mm focal length Schneider-Xenotar lens and an off-the-shelf 24-inch telephoto lens procured from Pacific Optical. The two lenses were bore sighted at the surface of the moon for an orbit of about 30 miles altitude. Light passed through each lens to the film, but the simultaneous images were interspersed with other exposures and not placed side by side. The camera employed the existing velocity-over-height sensor to regulate the speed of the lens shutters, which compensated for image motion. The Boeing Airplane Company designed and built a solar-powered spacecraft stabilized in attitude on three axes and integrated it with the payload and an Atlas-Agena rocket combination. NASA launched five of the "SAMOS Lunar Orbiters" successfully in 1966-1967. Equipped with film storage and in view of earth receiving stations for over one-half hour on each revolution of the moon, the near-real-time film-readout imaging system photo-mapped virtually the entire moon, paving the way for Project Apollo's manned lunar landings that began later in the decade. (U)

10. R. Cargill Hall, "A History of the Military Polar Orbiting Meteorological Satellite Program," *Quest, The History of Spaceflight Quarterly*, Vol. 9, No. 2, 2002, pp. 4-19. (U)

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